CLAIMS

1. A method for scheduling data transmissions on a forward link in a communication network comprising at least one cell and at least one scheduled user, said method comprising the steps of :

determining a forward link capacity available for each of said at least one cell;

assigning an assigned transmission rate to each of said at least one scheduled user;

sending said assigned transmission rate to said at least one scheduled user; and

wherein said assigned transmission rate is based on said forward link capacity available for each of said at least one cell.

2. The method of claim 1 wherein said determining step, said assigning step, and said sending step are repeated every K frames, wherein K is an integer greater than or equal to one.

3. The method of claim 1 wherein said assigning step further comprises the step of :

determining an active member set for each of said at least one scheduled user, said active member set containing at least one cell in communication with said scheduled user;

wherein said assigned transmission rate is further based on said forward link capacity available for one or more of said at least one cell in said active member set.

4. The method of claim 3 wherein said assigning step further comprises the step of :

receiving a queue size for each of said least one scheduled user, said queue size determinative of an amount of data to be transmitted to each of said at least one scheduled user; and

wherein said assigned transmission rate is further based on said queue size for each of said at least one scheduled user.

5. The method of claim 4 wherein said assigning step further comprises the step of :

creating a priority list of scheduled users, said priority list containing each of said at least one scheduled user, wherein each of said least one scheduled user is assigned a priority; and

wherein said assigned transmission rate is further based on said priority of each of said at least one scheduled user.

6. The method of claim 5 wherein said assigning step further comprises the steps of :

selecting a selected scheduled user from said priority list of scheduled users, said selected scheduled user having a highest priority among said at least one scheduled user in said priority list;

calculating a maximum supportable transmission rate for said selected scheduled user by one or more of said at least one cell in said active member set of said selected scheduled user;

selecting a minimum transmission rate from said maximum supportable transmission rates, said minimum transmission rate being defined as a maximum transmission rate; and

wherein said assigned transmission rate is at or below said maximum transmission rate.

7. The method of claim 6 wherein said assigning step further comprises the step of :

recommending a preferred transmission rate, said preferred transmission rate being based on said queue size of said selected scheduled user; and

wherein said assigned transmission rate is at or below said preferred transmission rate.

8. The method of claim 7 wherein said assigning step further comprises the steps of :

updating said forward link capacity available for one or more of said at least one cell in said active member set of said selected scheduled user to reflect a capacity allocated to said selected scheduled user; and

removing said selected scheduled user from said priority list.

9. The method of claim 2 further comprising the step of :

reassigning said assigned transmission rate of zero or more of said at least one scheduled user to a temporary transmission rate, wherein said temporary transmission rate is dependent on said forward link capacity available for each of said at least one cell.

10. The method of claim 9 wherein said reassigning step further comprises the steps of :

creating a temporary cell list of affected cells from said at least one cell in the communication network, said affected cells having inadequate transmit power to transmit data to said at least one scheduled user.

11. The method of claim 10 wherein said reassigning step further comprises the steps of :

creating a temporary priority list of affected scheduled users, said affected scheduled users comprising of said at least one scheduled user in the communication network.

12. The method of claim 11 wherein said reassigning step further comprises the steps of :

selecting an affected scheduled user from said temporary priority list of affected scheduled users, said selected affected scheduled user having a highest priority among said at least one scheduled user in said temporary priority list;

calculating a maximum temporary supportable transmission rate for said selected affected scheduled user by one or more of said at least one cell in said active member set of said selected affected scheduled user;

selecting a minimum transmission rate from said maximum temporary supportable transmission rates, said minimum transmission rate being defined as a maximum temporary transmission rate; and

wherein said temporary transmission rate is at or below said maximum temporary transmission rate and said assigned transmission rate.

13. The method of claim 12 wherein said reassigning step further comprises the steps of :

updating said forward link capacity available for one or more of said at least one cell in said active member set of said selected affected scheduled user to reflect a capacity allocated to said selected affected scheduled user; and

removing said selected affected scheduled user from said priority list.

14. An apparatus for scheduling data transmission on a forward link in a communication network comprising at least one cell and at least one scheduled user, said apparatus comprising :

controller means for collecting a status information for said communication network and for scheduling data transmissions from said at least one cell to said at least one scheduled user;

memory means connected to said controller means for storing said status information; and

timing means connected to said controller means for providing timing signals to said controller means, said timing signals enable said controller means to perform scheduling of data transmission.